

**Con Edison – 11th Street Conduit
Draft Upland Site Summary**

CON EDISON – 11TH STREET CONDUIT (DAR SITE ID #110)

Address: Ash Street and McGuinness Boulevard, Brooklyn, Kings, New York 11222

Tax Lot Parcel(s): Brooklyn Block 2491, Lot 136

Latitude: 40.738481

Longitude: -73.952379

Regulatory Programs/
Numbers/Codes: RCRA Handler ID NYR000078469, SPDES No. NY0201138; NYSDEC Spill No. 9910098, 0111517, 0202606, 0606690, 0606729, 0609866, and 0609822

Analytical Data Status: ☒ Electronic Data Available ☐ Hardcopies only
☐ No Data Available

1 SUMMARY OF CONSTITUENTS OF POTENTIAL CONCERN (COPCs) TRANSPORT PATHWAYS TO THE CREEK

The current understanding of the transport mechanisms of COPCs from the upland portions of the Consolidated Edison, Inc. (Con Edison) – 11th Street Conduit site (site) to Newtown Creek is summarized in this section and in Table 1 and supported in the following sections.

Overland Transport

The site is adjacent to Newtown Creek. Stormwater at the site is expected to infiltrate into the ground, flow overland towards Newtown Creek, or discharge to the creek via a local stormdrain system. There is insufficient evidence to make a current or historical pathway determination.

Bank Erosion

No specific evidence of bank erosion was identified in the available site records. A wooden bulkhead extends across the shoreline at the site. There is insufficient evidence to make a current or historical pathway determination.

Groundwater

Information regarding on-site groundwater investigations was not identified in documents available for review. There is insufficient evidence to make a current or historical pathway determination.

Overwater Activities

The site is adjacent to Newtown Creek. Information regarding overwater activities was not identified in documents available for review. There is insufficient evidence to make a current or historical pathway determination.

Stormwater/Wastewater Systems

Operations at the site are covered under New York State Pollutant Discharge Elimination System (SPDES) Permit No. NY0201138 for discharge to one outfall to Newtown Creek (believed to be Outfall NCB-006131-002) located at the northwest corner of the property in Brooklyn (Ash Street and McGuinness Boulevard). The outfall is connected to a sump pump that discharges up to 85,000 gallons per day (gpd) of groundwater and stormwater that infiltrates into and collects in the Con Edison utility conduit beneath Newtown Creek. Direct discharge of stormwater and wastewater is a potentially complete historic pathway and a complete current pathway. There is insufficient evidence to make a current or historical pathway determination for discharge to sewer/combined sewer overflows.

Air Releases

Information regarding air emissions from the site was not identified in documents available for review. There is insufficient evidence to make a current or historical pathway determination.

2 PROJECT STATUS

The site is currently listed as a Conditionally Exempt Small Quantity Generator (CESQG; FOIA Report 2009; EDR 2010). The Resource Conservation and Recovery Act (RCRA) ID is NYR000078469 and the NYSDEC Site Manager is Bob Wither.

No available documents containing environmental investigations were identified for this site.

3 SITE OWNERSHIP HISTORY

Respondent Member:

☐ Yes ☒ No

Owner	Years	Occupant	Types of Operations
A J McCollums	circa 1920s	A J McCollums	Coal yards
Consolidated Edison	1964 – present	Consolidated Edison	Conduit outfall

4 PROPERTY DESCRIPTION

This upland parcel occupies approximately 0.67 acres¹ adjacent to Newtown Creek (see Figure 1). The property is located at the intersection of Ash Street and McGuinness Boulevard in Brooklyn, in the county of Kings, New York. The 11th Street Conduit provides an artificial closed conduit under Newtown Creek, which houses the Con Edison electrical distribution cable between Brooklyn and Queens. The tunnel extends from the site at Ash Street and McGuinness Boulevard to 11th Street and 47th Road in Queens (see Attachment 1). The property is generally flat with steep slopes at the bulkhead adjacent to Newtown Creek. The majority of the site appears to be unpaved with areas of vegetation above the creek. Structures include a single, one-story building, approximately 850 square feet, located on the western portion of the property. The building contains the primary “headhouse” that controls tunnel operations at the property. A wooden bulkhead extends across the 150-foot shoreline at the north side of the property.

The site is bordered by Newtown Creek to the north, an industrial properties to the east and south, and by the Pulaski Bridge to the west. The property lies within a manufacturing district, zoned as M1-2 (NYCDP 2011). M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities..

A 2010 aerial photograph of the site is presented as Figure 1.

5 CURRENT SITE USE

The site is currently owned by Con Edison and is used for electric power distribution.

¹ Acreage is an approximation of the site tax parcel using geographic information system data.

6 SITE USE HISTORY

The lot was formerly used as a coal yard (E. Belcher Hyde Map Co. Inc. 1929). Consolidated Edison, Inc. purchased the lot in 1964 (Con Edison 1994).

7 CURRENT AND HISTORICAL AREAS OF CONCERN AND COPCs

The current understanding of the historical and current potential upland and overwater areas of concern at the site is summarized in Table 1. The following sections provide brief discussion of the potential sources and COPCs at the site requiring additional discussion.

7.1 Uplands

Reviewed records did not indicate upland areas of concern. This could be due to missing information or a lack of environmental issues at the site. COPCs at the site include polychlorinated biphenyls (PCBs), petroleum hydrocarbons, creosote, and volatile organic compounds (VOCs) based on general knowledge of constituents associated with electrical distribution equipment, spill reports, and site SPDES permit requirements (Con Edison 1994).

7.2 Overwater Activities

Overwater activities are not a current transport pathway.

7.3 Spills

Documented spills at the site are summarized as follows:

NYSDEC Spill No.	Spill Date	Close Date	Material Spilled	Remarks
0111517	03/06/02	09/05/06	Unknown Petroleum	Black oily substance in trough of the conduit
0202606	06/11/02	08/26/02	Unknown Material	Reported approximately 2 pints of unknown oil in 500 gallons of water in sump pump structure. Liquid appeared to be contained.
0606690	09/11/06	12/21/06	Creosote	300 gallons spilled, mixed with water

NYSDEC Spill No.	Spill Date	Close Date	Material Spilled	Remarks
0606729	09/12/06	12/21/06	Antifreeze (0.5 gallon)	Spilled from Consolidated Edison vehicle to soil
0609866	11/29/06	01/25/07	Unknown Petroleum	Light sheen on Newtown Creek in vicinity of the Consolidated Edison tunnel (area of roughly 40 feet by 15 feet)
0609822	11/28/06	02/20/07	Unknown Material (mixture of oil and grease)	Equipment failure (sump pump cables snapped) caused spill to surface water
9908111	10/04/99	01/10/08	Unknown Petroleum	Equipment failure spill to soil
9910098	11/19/99	11/19/99	Lube oil	1 gallon spill to soil due to human error

Notes:

Information gathered from the Environmental Data Resources DataMap Environmental Atlas (EDR 2010).
 NYSDEC – New York State Department of Environmental Conservation

8 PHYSICAL SITE SETTING

Site-specific hydrogeologic information was not identified in documents available for review. The geologic setting for Newtown Creek consists of impermeable Precambrian and Paleozoic crystalline bedrock, overlain by the Upper Cretaceous Raritan formation, Magothy formation and Matawan Group (undifferentiated), unconsolidated Pleistocene deposits and upper Pleistocene glacial deposits and Holocene shore, beach salt-marsh deposits, and alluvium, along with local occurrences of artificial fill (Buxton et al. 1981; Soren and Simmons 1987). The primary areas of groundwater discharge are Newtown Creek and its tributaries and the East River (Misut and Monti 1999). In the vicinity of Newtown Creek, groundwater flow in the Upper Glacial aquifer is generally north and south towards the creek. With increased distance from the creek, groundwater will flow towards the nearest surface water body to discharge (Misut and Monti 1999). Incidences of perched groundwater may occur above the Upper Glacial Aquifer in some areas, particularly in formerly low-lying areas that have been filled. Groundwater flow at a specific property may differ from the regional pattern due to pumping for groundwater treatment or dewatering activities (Misut and Monti 1999), the presence of buried utilities, or other preferential pathways.

9 NATURE AND EXTENT (CURRENT UNDERSTANDING OF ENVIRONMENTAL CONDITIONS)

9.1 Soil

Soil Investigations

☐ Yes ☒ No

Bank Samples

☐ Yes ☒ No ☐ Not Applicable

Soil-Vapor Investigations

☐ Yes ☒ No

Information regarding on-site soil investigations was not identified in documents available for review.

9.2 Groundwater

Groundwater Investigations

☐ Yes ☒ No

NAPL Presence (Historical and Current)

☐ Yes ☒ No

Dissolved COPC Plumes

☐ Yes ☒ No

Visual Seep Sample Data

☐ Yes ☒ No ☐ Not Applicable

Information regarding on-site groundwater investigations was not identified in documents available for review.

9.3 Surface Water

Surface Water Investigation

☐ Yes ☒ No

SPDES Permit (Current or Past)

☒ Yes ☐ No

Industrial Wastewater Discharge Permit (Current or Past)

☐ Yes ☒ No

Stormwater Data

☐ Yes ☒ No

Catch Basin Solids Data

☐ Yes ☒ No

Wastewater Data

☐ Yes ☒ No

9.3.1 Stormwater and Wastewater Systems

This site is within the Newtown Creek Water Pollution Control Plant (WPCP) sewershed. Stormwater at the site is expected to infiltrate into the ground, flow overland towards Newtown Creek, or discharge to the creek via a local stormdrain system (potentially at

Outfalls NCB-246 and NCB-248). Seepage of groundwater through the conduit walls and infiltration of rainwater through the riser shafts located at Ash Street and McGuinness Boulevard and at 11th Street and 47th Road is discharged to Newtown Creek at Outfall NCB-006131-002 (Con Edison 1994). Sanitary wastewater is conveyed to the Newtown Creek WPCP (NYCDEP 2007).

9.3.2 SPDES Permit

The SPDES permit application was submitted on March 20, 1994. The operation contributing to the discharge flow is described as a groundwater infiltration and stormwater pump/recovery system from the tunnel. Because the electrical distribution cables within the conduit are oil-filled, an oil-water separator was installed to separate any oil from collected waters prior to discharge, as depicted in Attachment 2 (Con Edison 1994; USEPA 1994b). The oil-water separator was installed in 1995. Sometime prior to the 2006 permit renewal, a coalesce filter was also installed in front of the oil-water separator to increase filtration capabilities of the outfall prior to discharge to Newtown Creek (NYSDEC 2006). Prior to 1995, collected water was discharged to Newtown Creek via sump pump discharge piping without treatment (Con Edison 1994).

The discharge flow is given as 85,000 gpd. The permit and additional modifications were issued on January 9, 1997, and it was subsequently renewed on a 5-year cycle. The most recent renewal was August 3, 2006 (expiring February 29, 2012). Permit parameters and limitations are summarized as follows (NYSDEC 1997, 2001, and 2006; NYSDEC 2011):

Permit Type	Permit Number	Start Date	Outfalls	Volume	Frequency-Parameters (Limit)
SPDES	SPDES No. NY0201138	01/09/97 (Renewed 09/06/01 and 08/03/06; expired 02/29/12)	001	85,000 gallons per day	Monthly instantaneous – Flow
					Monthly grab – Total Suspended Solids (50 mg/L Daily Maximum)
					Monthly grab – Oil & Grease (15 mg/L Daily Maximum)
					Annual grab – Benzene (0.10 mg/L Daily Maximum)
					Annual grab – Toluene (0.10 mg/L Daily Maximum)

Permit Type	Permit Number	Start Date	Outfalls	Volume	Frequency-Parameters (Limit)
					Annual grab – Xylene (0.10 mg/L Daily Maximum)
					Annual grab – Ethylbenzene (0.10 mg/L Daily Maximum)
					There shall be no discharge of polychlorinated biphenyl compounds (additional requirement)

Note:
mg/L – milligram per liter

9.3.3 Wastewater Data

The SPDES permit application for the site includes analytical results for an unknown number of samples of conduit seepage water collected between December 1993 and February 1994. According to SPDES discharge monitoring data from between April 30, 2006, and March 31, 2011, the site was in compliance for all dates monitored, except for one exceedance for oil and grease levels on November 30, 2006 (documented discharge: 21 mg/L; NYSDEC 2011). No PCB monitoring results were present in the 2006 to 2011 SPDES monitoring data. Discharge monitoring data for the period from issuance of the permit in 1997 to April 2006 was not available.

A summary of the available wastewater sampling results is provided in the following table:

Report Date	Constituent	Result	Unit	Limit ²	Source
March 1994 ¹	PCBs (All Aroclors)	<0.3	ppb	No discharge of PCBs	Consolidated Edison 1994
	Oil and Grease	8.4	ppm	15 ppm	
	Benzene	<1.0	ppb	100 ppb	
	Toluene	<1.0	ppb	100 ppb	
	Ethylbenzene	<1.1	ppb	100 ppb	
	Xylenes	<1.3	ppb	100 ppb	
April 2006 – March 2011	PCBs (All Aroclors)	Not reported	--	No discharge of PCBs	NYSDEC 2011
	Oil and Grease	<5 – 21	ppm	15 ppm	
	Benzene	3 – 5	ppb	100 ppb	
	Toluene	3 – 18	ppb	100 ppb	
	Ethylbenzene	<5 – 42	ppb	100 ppb	
	Xylenes	<3 – 32	ppb	100 ppb	

Notes:

1 – Prior to permit issuance

2 – 1997 permit limits

mg/L – milligram per liter

NYSDEC – New York State Department of Environmental Conservation

PCB – polychlorinated biphenyl

ppb – parts per billion

ppm – parts per million

9.3.4 Surface Water Summary

The site discharges to Newtown Creek groundwater and stormwater that infiltrates into and collects in the tunnel. An SPDES permit was issued to the site in 1997 and has been renewed on a 5-year cycle. The current permit will expire in 2012 (NYSDEC 2006, 2011). One effluent violation is documented in December 2006 for oil and grease discharge of 40 percent above the specified permit limit (USEPA 2010). However, no other permit violations or compliance issues are documented at the site (USEPA 2010 and 2011).

9.4 Sediment

Creek Sediment Data

☐ Yes ☒ No ☐ Not Applicable

Information regarding sediment investigations was not identified in documents available for review.

9.5 Air

Air Permit

☐ Yes ☒ No

Air Data

☐ Yes ☒ No

Information regarding air emissions from the site was not identified in documents available for review.

10 REMEDIATION HISTORY (INTERIM REMEDIAL MEASURES AND OTHER CLEANUPS)

Information regarding on-site remedial activities was not identified in documents available for review.

11 BIBLIOGRAPHY/INFORMATION SOURCES

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Misut and Monti (Misut, P.E. and Monti, J. Jr.), 1999. *Simulation of Ground-Water Flow and Pumpage in Kings and Queens Counties, Long Island, New York*. U.S. Geological Survey. Water-Resources Investigations Report 98-4071. 1999.

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- Sanborn, 1916. *Insurance Maps of the Borough of Brooklyn, City of New York*. Volume 4: Sheet 10. Original 1916, revised 1942.
- Soren and Simmons (Soren, J. and Simmons, D.L.), 1987. *Thickness and Hydrogeology of Aquifers and Confining Units Below the Upper Glacial Aquifer on Long Island, New York*. U.S. Geological Survey. Water-Resources Investigations Report 86-4175. Scale 1:125,000. 1987.
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Available from: <http://www.epa-echo.gov/> Queried: December 20, 2010.

12 ATTACHMENTS

Figures

Figure 1 Site Vicinity Map: Con Edison – 11th Street Conduit

Tables

Table 1 Potential Areas of Concern and Transport Pathways Assessment

Supplemental Attachments

Attachment 1 Figure 2: Site Plot Plan (Con Edison 1994)

Attachment 2 Figure 3: Con Edison 11th Street Conduit Flow Diagram
(NYSDEC 2006)

Table 1
Potential Areas of Concern and Transport Pathways Assessment – Con Edison – 11th Street Conduit

Potential Areas of Concern	Media Impacted					COPCs															Potential Complete Pathway					
Description of Areas of Concern	Surface Soil	Subsurface Soil	Groundwater	Catch Basin Solids	Creek Sediment	TPH			VOCs			SVOCs	PAHs	Phthalates	Phenolics	Metals	PCBs	Herbicides and Pesticides	Dioxins/Furans	Overland Transport	Groundwater	Direct Discharge – Overwater	Direct Discharge – Storm/Wastewater	Discharge to Sewer/CSO	Bank Erosion	Air Releases
						Gasoline-Range	Diesel – Range	Heavier – Range	Petroleum Related (e.g., BTEX)	VOCs	Chlorinated VOCs															
Spills	√	?	?	?	?	√	?	√	√	?	?	?	√	?	?	?	?	?	?	?	?	?	?	?	?	?
Leaks from electrical equipment in Conduit	?	?	?	?	?	?	?	√	√	√	?	?	√	?	?	?	√	?	?	?	?	?	√	?	?	?

Notes:

√ – COPCs are/were present in areas of concern having a current or historical pathway that is determined to be complete or potentially complete.

? – There is not enough information to determine if COPC is/was present in area of concern or if pathway is complete.

-- – Current or historical pathway has been investigated and shown to be not present or incomplete.

BTEX - benzene, toluene, ethylbenzene, and xylene

COPC – constituent of potential concern

CSO – combined sewer overflowPAH – polycyclic aromatic hydrocarbon

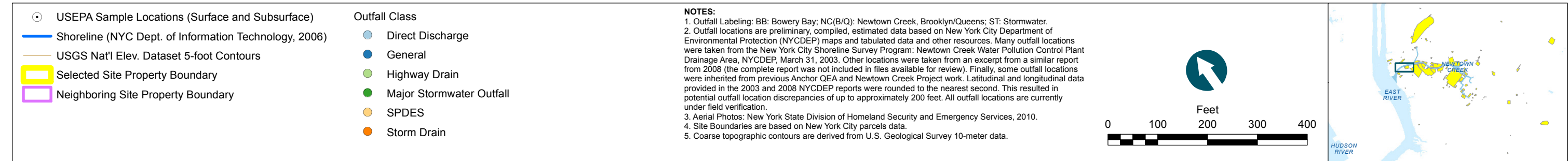
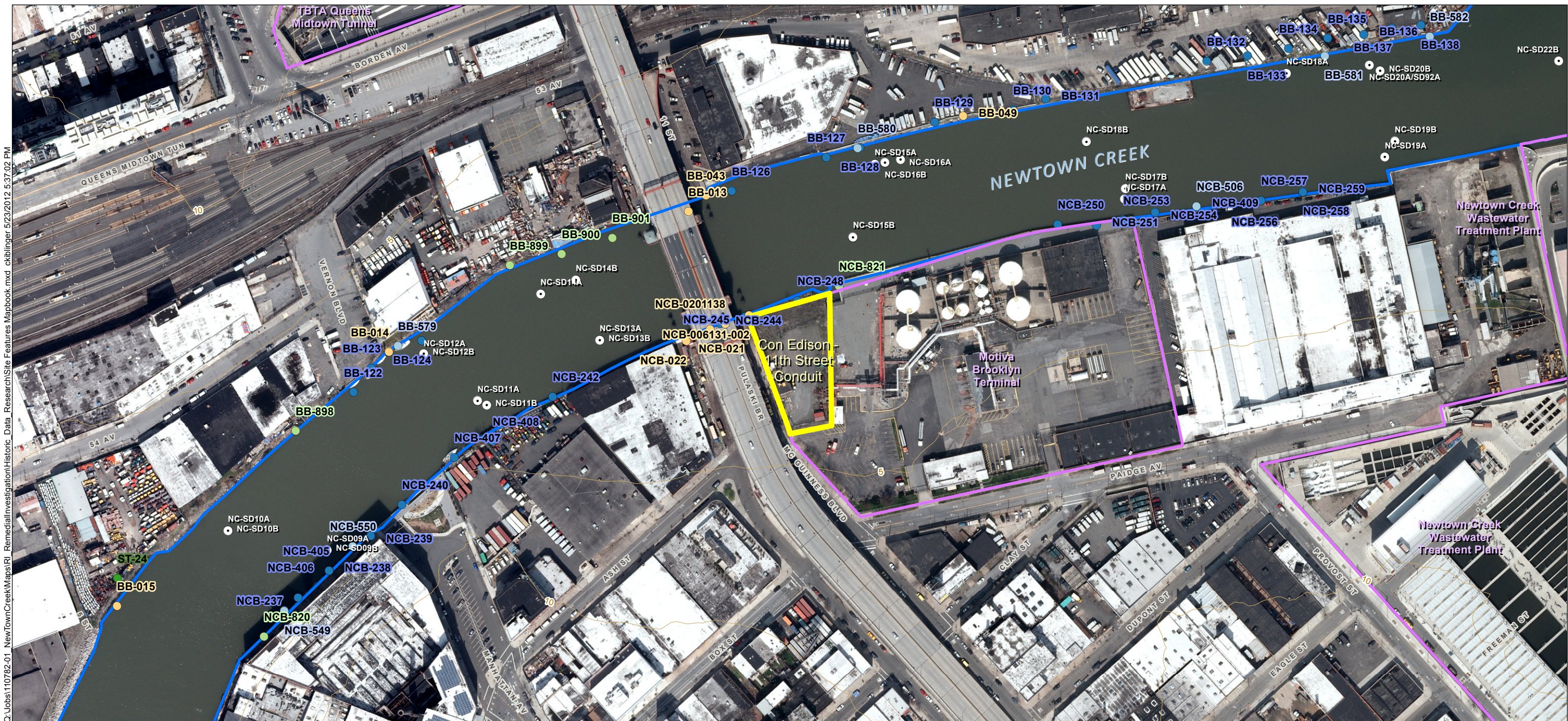
PCB – polychlorinated biphenyl

SVOC – semi-volatile organic compound

TPH – total petroleum hydrocarbon

VOC – volatile organic compound

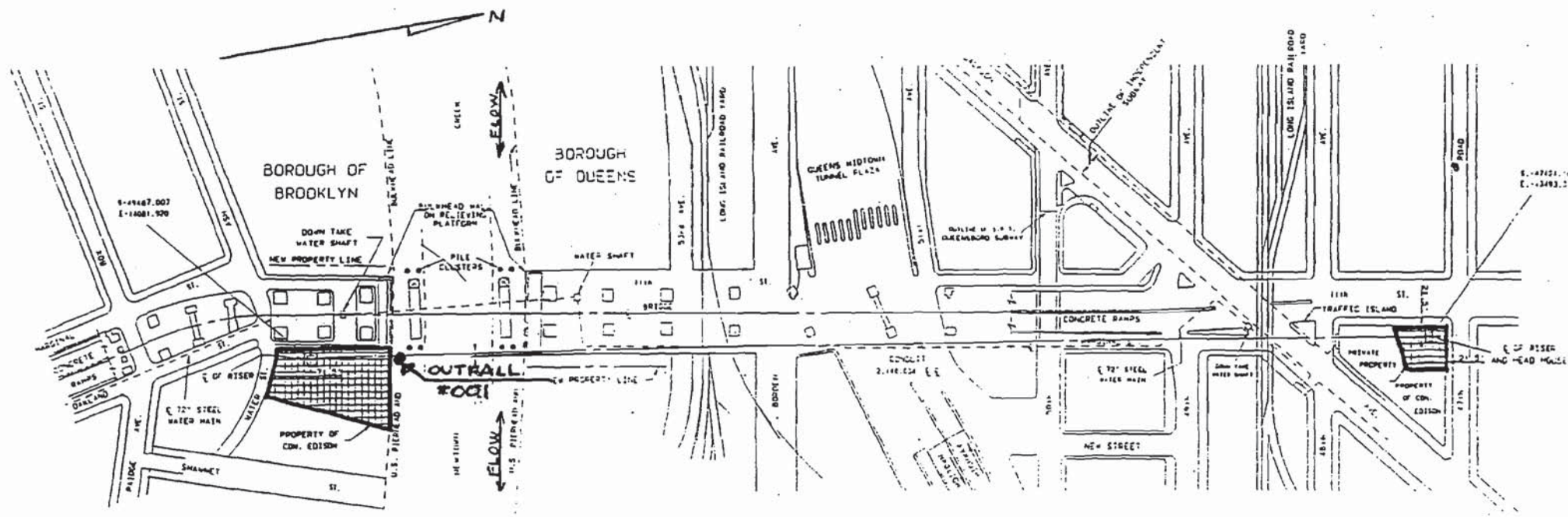
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Figure 1
Site Vicinity Map
Draft Upland Site Summary: Con Edison - 11th Street Conduit
Newtown Creek RI/FS

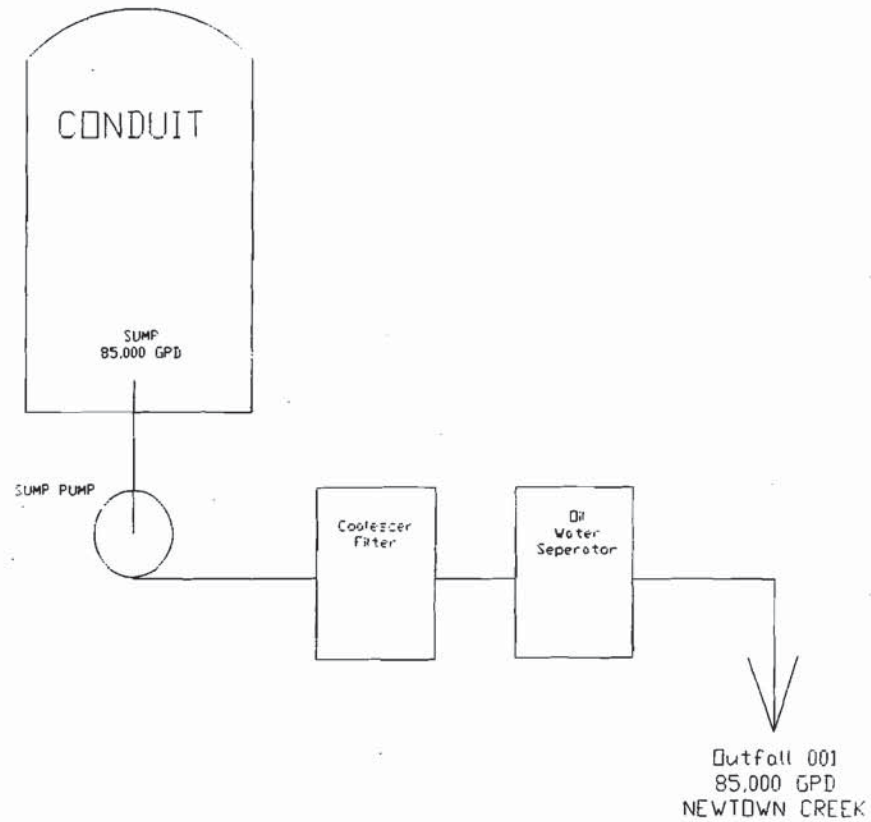
SUPPLEMENTAL ATTACHMENTS



CON EDISON
11th STREET CONDUIT
SITE PLOT PLAN
EPA FORM 1 XI. MAP

Figure 2

CON EDISON
11th STREET CONDUIT
FLOW DIAGRAM
EPA FORM 2D.III.B.
Figure #3



NOTE: Wastewater Sources from seepage of groundwater through the conduit walls and infiltration of rainwater through the riser air shafts.